'GOOD VIBRATIONS'

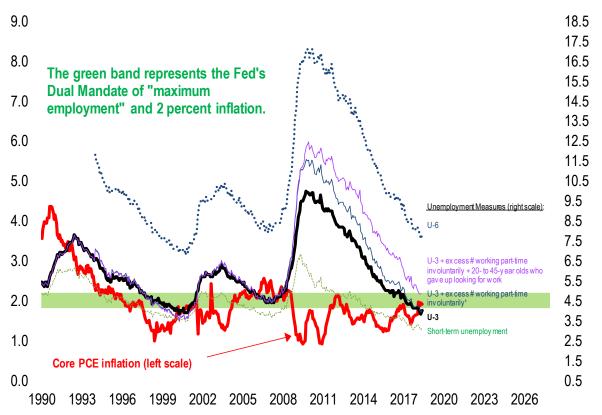
September 26, 2018

Home



The Fed's Dual Mandates Met

Core PCE inflation (% ch from 12 months earlier) Unemployment (% of the labor force)

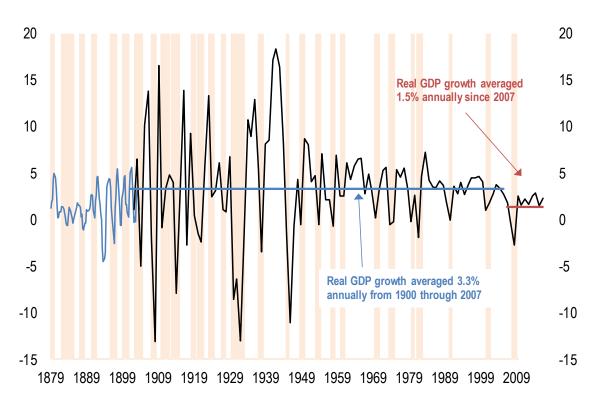


Sources: Haver Analytics; U.S. Department of Commerce; U.S. Department of Labor. Updated through June 2018 (inflation) and June 2018 (unemployment).



The 'Secular Stagnation' Label ...

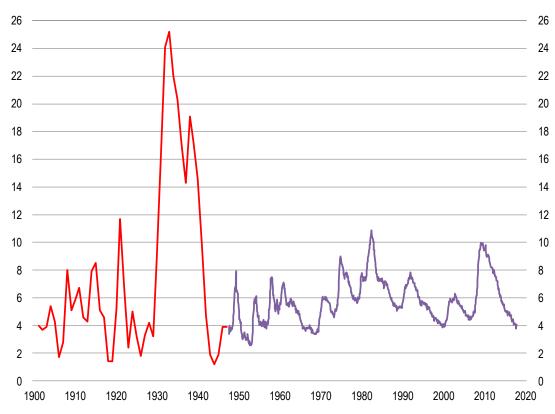
Real U.S. GDP growth (percent change from the previous year)



Sources: Haver Analytics; U.S. Department of Commerce; NBER Macroeconomic database; Ray Fair. Updated through 2018 Q1.

... Heads to the Museum ...

Unemployment (percent of the labor force)

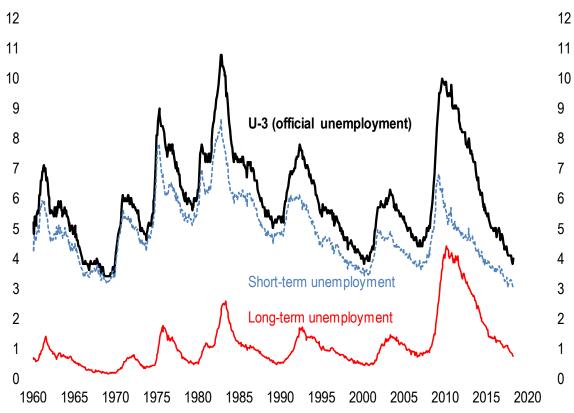


Sources: Haver Analytics; U.S. Department of Labor. Updated through June 2018.



... With Labor Markets Doing This

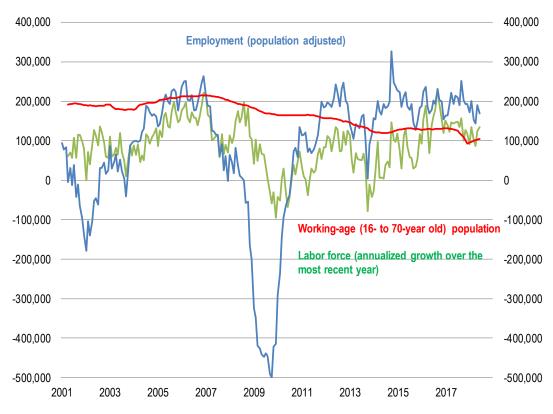
Unemployment (percent of the labor force)



Sources: Haver Analytics; U.S. Department of Labor. Updated through June 2018.

P.S. It's All About Demographics

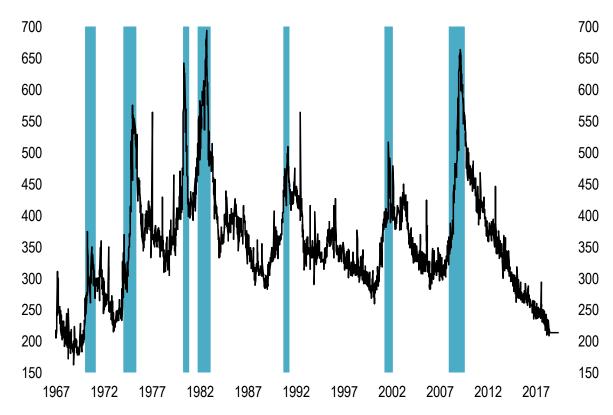
Employment, working-age and labor force (mn ch in thousands over the most recent 12 months)



Sources: Haver Analytics; Census. Updated through June 2018.

[This One Knew the Story from the Get Go ...

Initial applications for unemployment benefits (thousands, weekly)



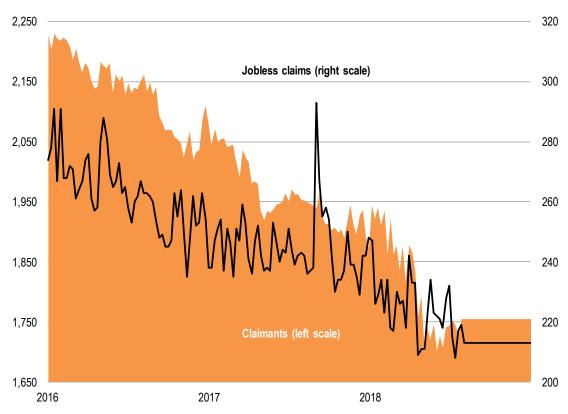
Sources: Haver Analytics; U.S. Department of Labor. Updated through August 4, 2018.



... Claims and Claimants]

Claimants (number)

Initial applications for unemployment benefits (thousands, weekly)

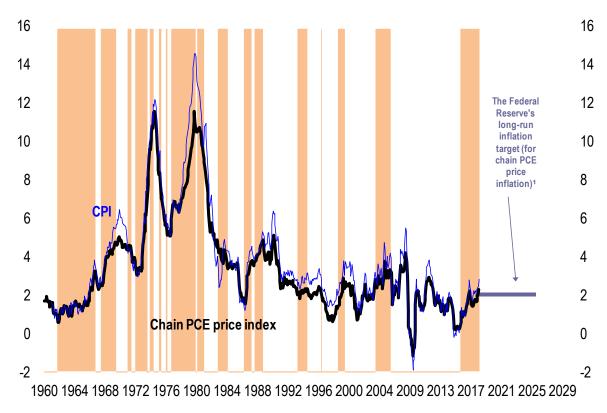


Sources: Haver Analytics; U.S. Department of Labor. Updated through July 28, 2018 (claimants) and August 4, 2018 (claims).



And Inflation's Back to 2 Percent ...

Consumer inflation (percent change from 12 months earlier)



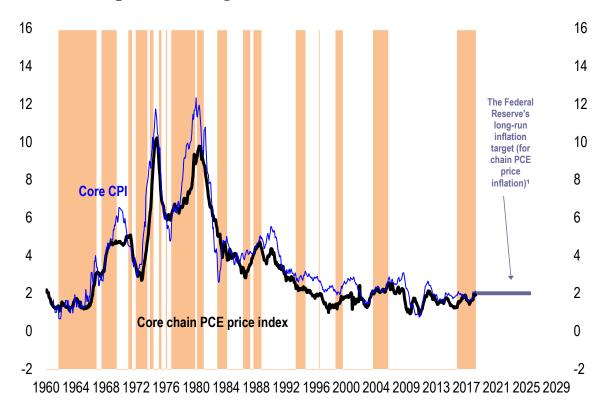
Note: vertical bars denote periods of Fed tightening.

Sources: Haver Analytics; U.S. Department of Commerce; U.S. Department of Labor. Updated through June 2018.



[Core Inflation]

Core consumer inflation (percent change from 12 months earlier)



Note: vertical bars denote periods of Fed tightening.

Sources: Haver Analytics; U.S. Department of Commerce; U.S. Department of Labor. Updated through June 2018.



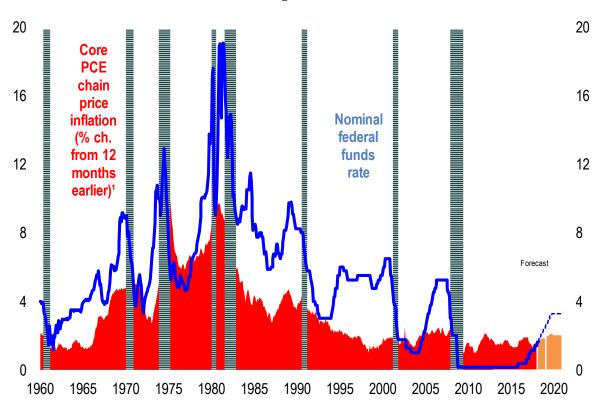
That Means the Fed Should Be Too

("Neutral" Is the Appropriate Policy Stance)



For the funds rate, 3%

Nominal federal funds rate and core inflation (percent)

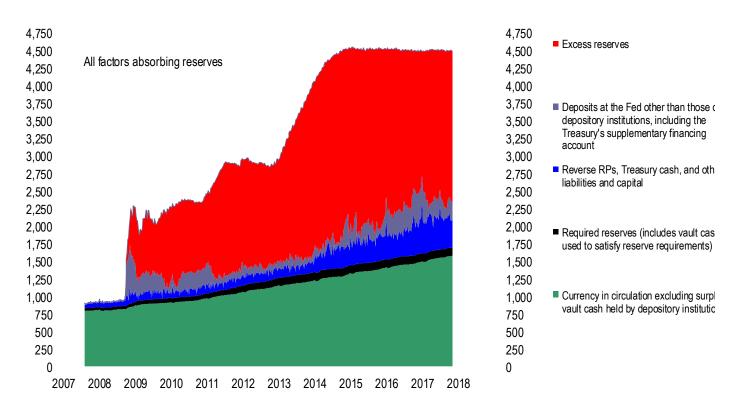


¹ The inflation metrics that the Federal Reserve Board uses to communicate its policies. Sources: Haver Analytics; U.S. Department of Commerce; Federal Reserve Board. Updated through February 2018 (inflation) and April 6,



For the Fed's Balance Sheet ...

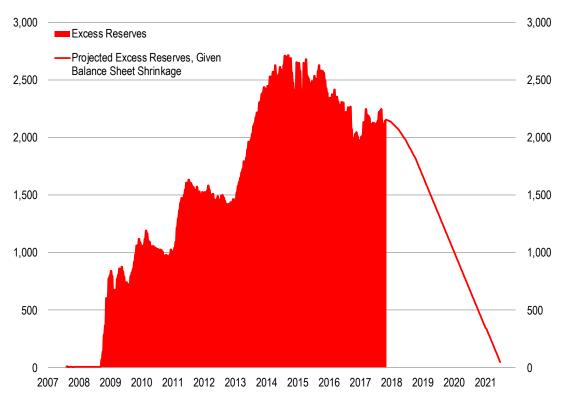
Federal Reserve liabilities (billions of dollars)



Sources: Haver Analytics; Federal Reserve Board. Updated through November 8, 2017.

... Minimal Excess Reserves

Excess reserves (billions of dollars)



Sources: Haver Analytics; Federal Reserve Board. Updated through November 8, 2017.

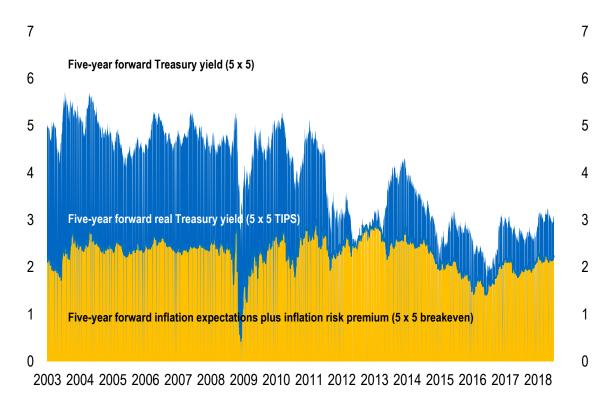


P.S. QE Distorts the Yield Curve



QE Lowered Bond Yields ... Take 1 ...

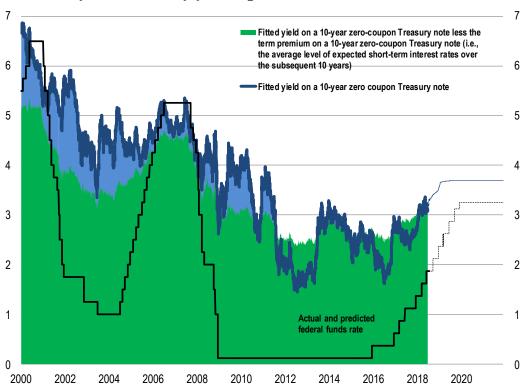
Components of the 5 x 5 nominal Treasury yield (percent)



Sources: Haver Analytics; Federal Reserve Board. Updated through July 27, 2018.

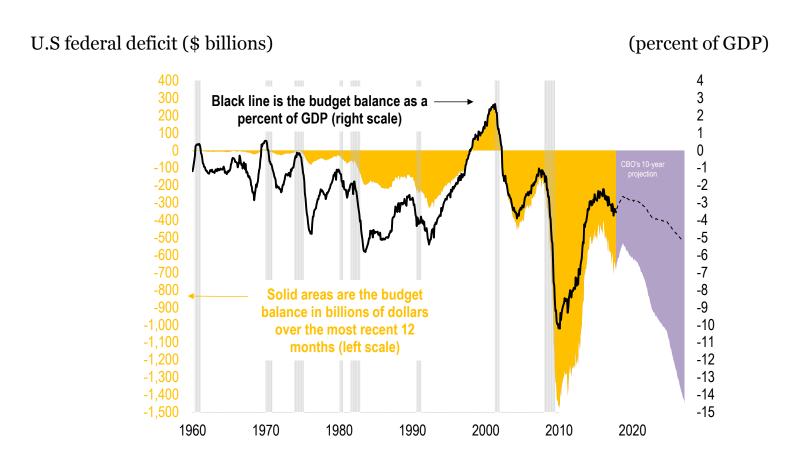
... Take 2

Components of the 10-year Treasury yield (percent)



Sources: Haver Analytics; Federal Reserve Board. Updated through July 27, 2018.

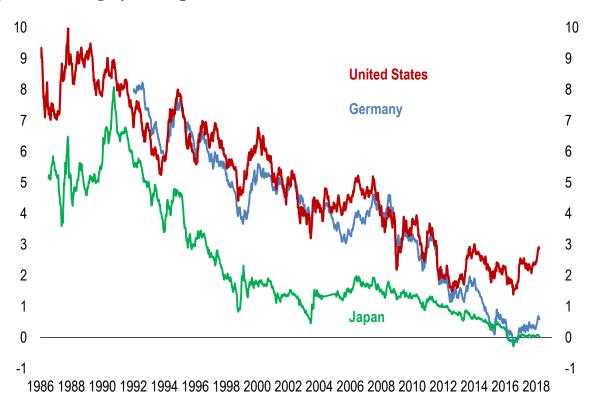
The Fiscal Outlook Implies Upside Risk ...



Sources: Haver Analytics; U.S. Department of Commerce; NBER Macroeconomic database. Updated through November 2017.

... Counterbalanced by QE Everywhere Else ...

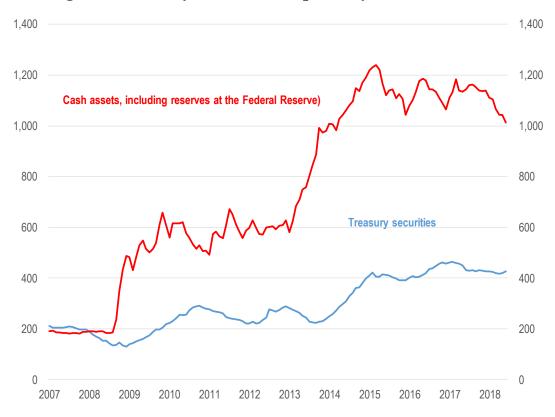
Selected 10-year sovereign yields (percent)



Sources: Haver Analytics; Federal Reserve Board; Bank of Japan; European Central Bank. Updated through March 16, 2018.

... the LCR (Will Temper QE's Unwind) ...

Selected assets of large domestically-chartered depository institutions (billions of dollars)



Sources: Haver Analytics; Federal Reserve Board. Updated through June 2018.

... and Trade Imbalances Lift Global Saving ...

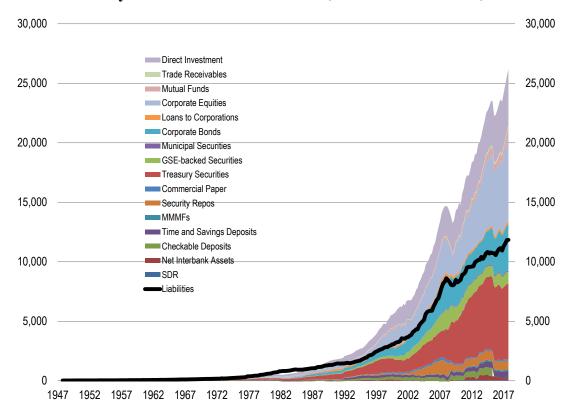
U.S. current account balance (billions of dollars over the most recent four quarters)



Sources: Haver Analytics; Bureau of Economic Analysis. Updated through 2018 Q1.

... Driving Foreign Buyers of Dollars

Dollar-based assets held by international investors (millions of dollars)

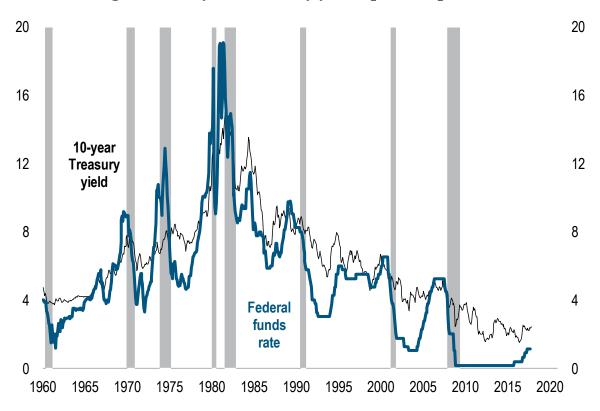


Sources: Haver Analytics; Federal Reserve Board. Updated through 2017 Q4.



Now, Central Banks Distort All Rates ...

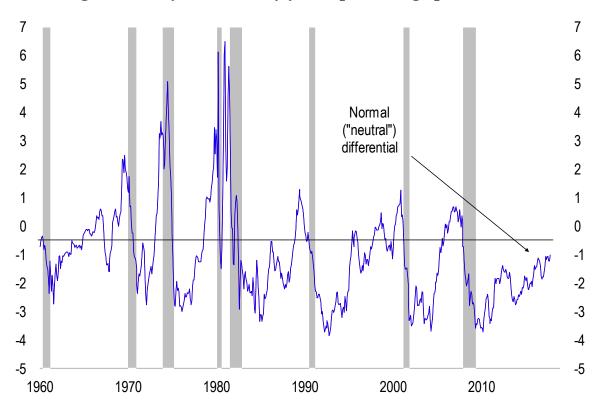
The federal funds rate target and 10-year Treasury yield (percent per annum)



Sources: Haver Analytics; NBER; Federal Reserve Board. Updated through January 12, 2018.

... and That Distorts the Meaning of This

Federal funds rate target less 10-year Treasury yield (percentage points)



Sources: Haver Analytics; NBER; Federal Reserve Board. Updated through January 12, 2018.

New Energy Building

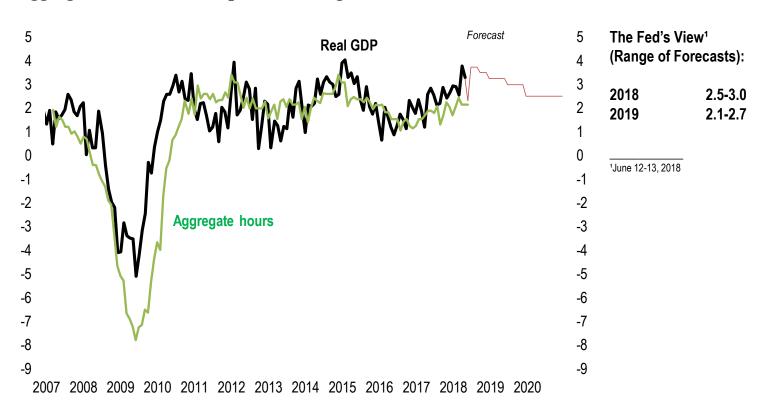


New Sources of Energy ...

- Monetary stimulus is receding, but still is accommodative ...
- New fiscal stimulus ...
 - Tax reform and relief (½ to ½ percentage point boost)
 - New fiscal spending
- Favorable fundamental factors ...
 - Global revival
 - Diminished energy drags
 - Regulatory reform
 - Hurricane recovery (+½ percentage point boost in 2018)
 - Equity wealth gains (1 to 2 percentage points boost)

... Are Speeding Things Up

Real GDP and aggregate hours worked (percent change from 12 months earlier)



Sources: Haver Analytics; Macroeconomic Advisers. Updated through May 2018 (GDP) and June 2018 (hours).

Look At Labor Market (Not GDP) Forecasts

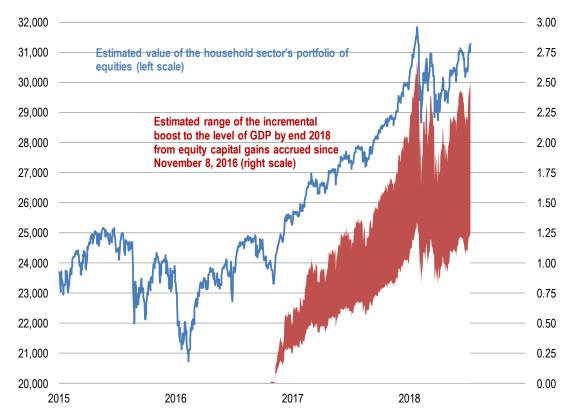
Selected Forecasts of the U.S. Economy

	2018				2018	2019		2018	2019
	Q1	Q2	Q3	Q4	Q4/Q4	Q4/Q4	May-18	Q4	Q4
			Unemployment Rate						
JPMC/IB	2.0	4.0	2.5	2.5	2.6	2.7	3.75	3.60	3.30
FRBP SPF	2.0	3.0	3.0	2.8	2.7	2.7	3.75	3.90	3.70
FOMC Median	2.0				2.7	2.4	3.75	3.60	3.50
Central tendency	2.0				2.6-3.0	2.2-2.6	3.75	3.6-3.7	3.4-3.5
Range	2.0				2.5-3.0	2.0-2.8	3.75	3.5-3.8	3.3-3.8
Blue Chip	2.0	3.5	3.0	2.8	2.9	2.3	3.75	3.70	3.60
JPMC/CB	2.0	4.4	4.0	3.2	3.4	3.4	3.75	3.70	3.60

Equity Gains Build Strong Balance Sheets ...

Household equity holdings ((\$ billions)

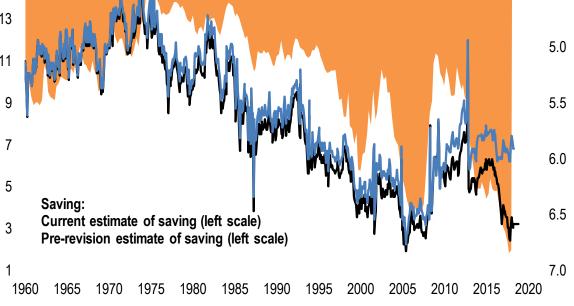
Mark-to-market GDP impact (percent)



Sources: Haver Analytics; Federal Reserve Bank of Richmond. Updated through July 13, 2018.

... Which We Haven't Responded to Yet





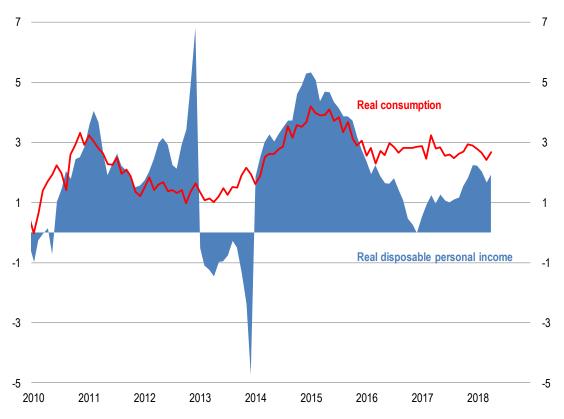
Household savings, net worth (ratio to income)

Sources: Haver Analytics; U.S. Dep. of Com.; Federal Reserve Board. Updated through 2018 Q1 (Flow of Funds) and June 2018 (NIPA).

Household saving (% of income)

Income Growth Lifted by Job Trends ...

Real consumer spending and real income (percent change from 12 months earlier)



Sources: Haver Analytics; U.S. Department of Commerce. Updated through May 2018.

... and Tax Relief

Budget impact (billions of dollars)

July 1, 2018

itic estimate of the impact	of tax spend	ing changes or	n the federal budget	(billions of dollars in	the period shown)		
		ral Revenue Dec	clines				
Billions of dollars							
						Incremental Boost	
						Annual Boost	
In	dividuals	Busine		Total		(% of Nominal GDP1)	
		Domestic	International ²		Excluding Repatriation		
2018	75.5	129.3	-68.9	135.9	204.8	0.70%	1.05%
2019	188.8	133.8	-42.6	280.0	322.6	0.74%	0.60%
2020	171.9	112.9	-26.0	258.8	284.8	-0.11%	-0.19%
2021	156.3	92.7	-28.0	221.0	249.0	-0.19%	-0.18%
2022	150.8	49.9	-22.9	177.8	200.7	-0.22%	-0.25%
2023	144.0	16.4	-22.5	137.9	160.4	-0.20%	-0.21%
2024	140.9	15.9	-36.7	120.1	156.8	-0.09%	-0.02%
2025	139.2	23.8	-48.7	114.3	163.0	-0.03%	0.03%
2026	41.4	28.2	-29.1	40.5	69.6	-0.38%	-0.48%
2027	-83.0	49.2	0.8	-33.0	-33.8	-0.38%	-0.53%
	1125.8	652.1	-324.6	1453.3	1777.9		
² Most of this refu	ers to the reveni	ues raised by enc	ouraging a repatriation of	revenues ahroad (defer	red IRS obligations).		

Weekly Insights on Markets and the Economy

Commercial Banking 27

Sources: Haver Analytics; Federal Reserve Bank of Richmond. Updated through June 29, 2018.

Rare (for Full Employment) Fiscal Stimulus

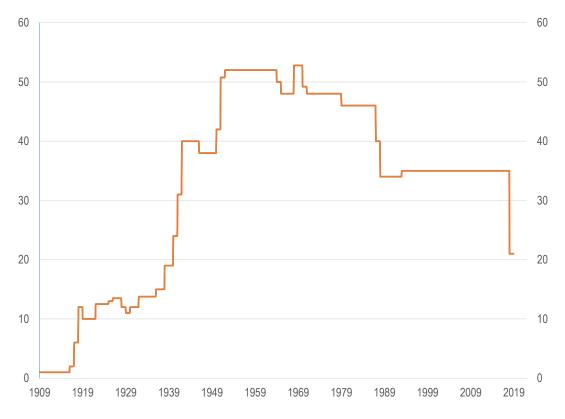
Budget impact (billions of dollars)

	,	<u>2017</u>	<u>2018</u>	2019	<u>2020</u>	<u>2021</u>	2022	2023	2024	<u>2025</u>	2026	<u>2027</u>	2028
Defici	t <u>s</u>												
June 2017 Deficit Projection (\$ billions) June 2017 Deficit Projection (% of GDP)		-563 -2.8%	-689 -3.3%	-775 -3.5%	-879 -3.8%	-1,027 -4.3%	-1,057 -4.3%	-1,083 -4.2%	-1,225 -4.6%	-1,352 -4.9%	-1,463 -5.1%		
			-271	450					ctors (% bi		455	-74	
	Legislation		-2/1	-459	-385	-315	-278	-243	-236	-241	-155	-/4	
	Impact of the Tax Cuts and Jobs Act Public Law 115-97	7)	-164	-228	-272	-292	-271	-243	-214	-191	-59	43	37
	Primary deficit		-160	-214	-243	-246	-208	-169	-136	-115	12	110	97
	Debt Service		-3	-14	-29	-47	-63	-74	-78	-76	-71	-66	-60
	Excluding the Macroeconomic Feedback		-197	-289	-325	-333	-302	-266	-238	-227	-104	-10	-25
	Effects of the Macroeconomic Feedback		33	61	53	41	31	22	24	36	44	54	62
	Bipartisan Budget Act of 2018 (PL 115-123) Consolidated Appropriations Act of 2018 (PL 1115-141	}	-107	-231	-113	-23	-7	0	-22	-50	-96	-117	
	Changes to Economic Assumptions		5	86	125	116	85	77	92	121	144	163	
	Technical Changes		24	81	26	-44	-56	-49	-17	-8	42	58	
Current (April 2018) Deficit Projection (\$ billions) -665 Current (April 2018) Deficit Projection (% of GDP) -3.5%			-804 -4.0%	-981 -4.6%	-1,008 -4.6%	-1,123 -4.9%	-1,276 -5.4%	-1,273 -5.2%	-1,244 -4.9%	-1,352 -5.1%	-1,320 -4.8%	-1,316 -4.6%	-1,526 -5.1%
Change in the Deficit Since June 2017 (\$ billions) Change in the Deficit Since June 2018 (percentage points of GDP)			-242 -1.2%	-292 -1.4%	-234 -1.1%	-243 -1.1%	-249 -1.0%	-215 -0.9%	-161 -0.6%	-128 -0.5%	31 0.1%	147 0.5%	
<u>Debt</u>													
June 2	2017 Debt Projection												
	\$ billions % of April 2018 projection of GDP	14,656 76	15,537 77	16,282 77	17,108 78	18,037 79	19,109 81	20,212 82	21,342 83	22,613 85	24,014 87	25,524 89	
Currer	nt (April 2018) Debt Projection												
Currer	\$ billions	14,665	15,688	16,762	17,827	18,998	20,319	21,638	22,932	24,338	25,715	27,087	28,671
	% of GDP	76	78	79	81	83	86	88	90	92	93	94	96

Sources: Haver Analytics; Federal Reserve Bank of Richmond. Updated through June 29, 2018.

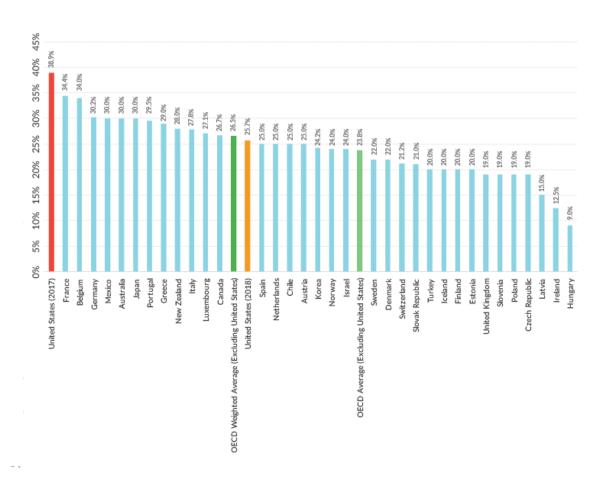
Tax Reform Is Historic ...

Effective corporate taxes (percent of pre-tax profits)



Sources: Haver Analytics; Federal Reserve Bank of Richmond. Updated through 2018 Q1.

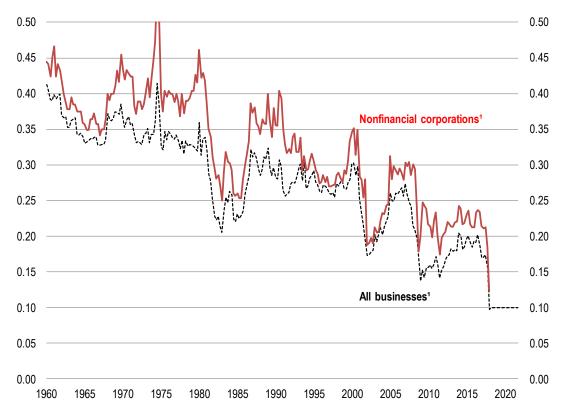
... Leveling the Field ...



Sources: OECD and Tax Foundation.

... Easing the Business Tax Burden ...

Corporate tax liability (percent of pre-tax profits)

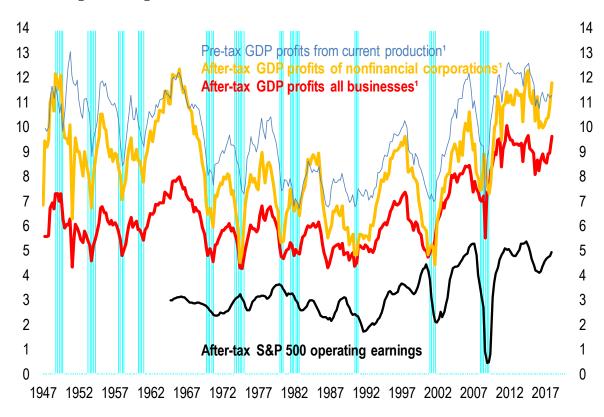


¹ Profits after with capital consumption and inventory valuation adjustments. Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2018 Q1.



... Lifting Profits ...

Selected measures of profits (percent of Gross Domestic Income)

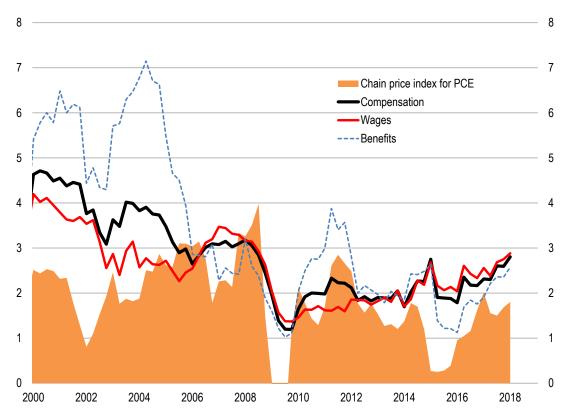


¹ Profits after with capital consumption and inventory valuation adjustments. Sources: Haver Analytics; U.S. Department of Commerce; Standard and Poor's. Updated through 2018 Q1.



... and Spilling Over to Worker Pay Too

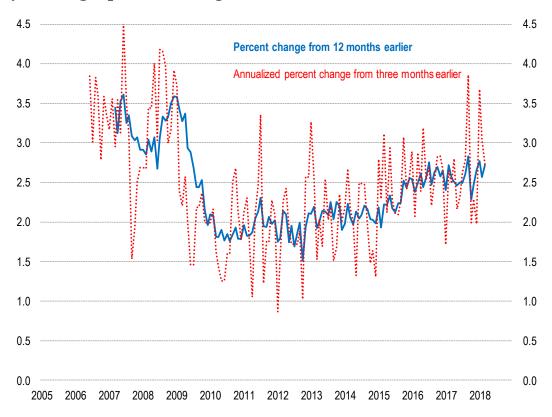
ECI and chain PCE inflation (percent change from 12 months earlier)



Sources: Haver Analytics; U.S. Department of Labor; U.S. Department of Commerce. Updated through 2018 Q1.

P.S. Wages Are Only a Part of the Package

Average hourly earnings (percent change from 12 months earlier)



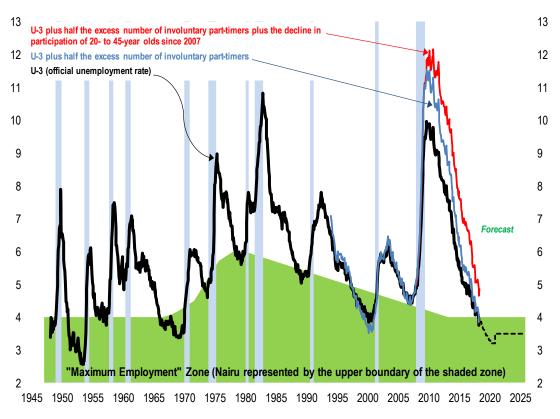
Two New Worries

("Overheating" and the Next Recession)



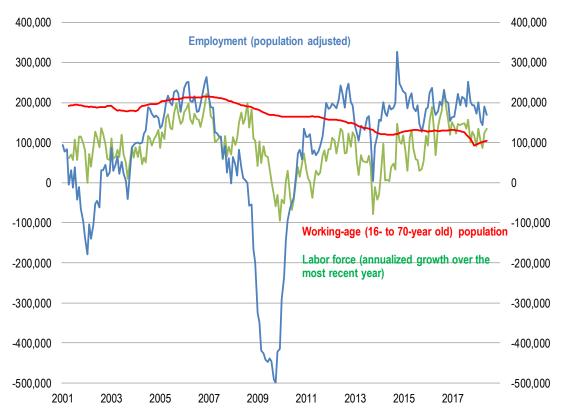
History Doesn't Know Everything

Unemployment (percent of the labor force)



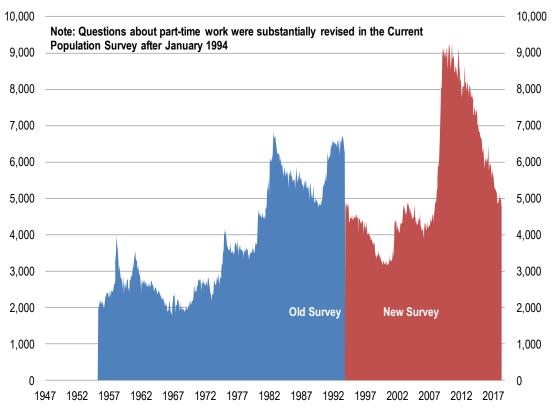
This Isn't the Look of "Maxed Out"

Employment and the labor force (percent change from 12 months earlier)



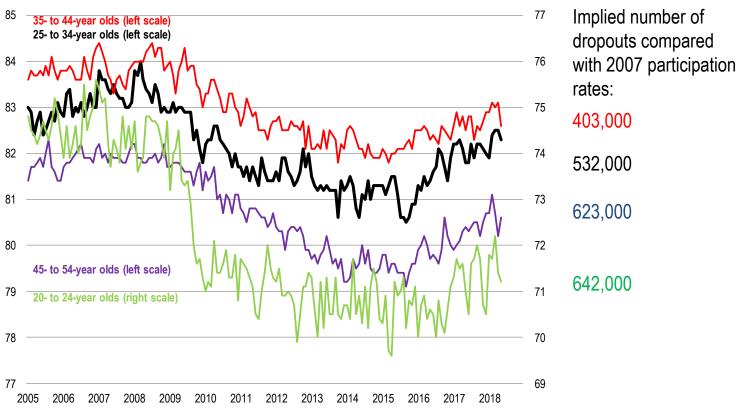
5 Million Involuntarily Part Timers Still

Number of people working part time involuntarily (thousands)



1 Million Sidelined Young Adults ...

Labor force participation for selected cohorts (percent of the respective population)



... Still Coming Back

Labor force participation for 20- to 45-year olds (percent of the respective population)

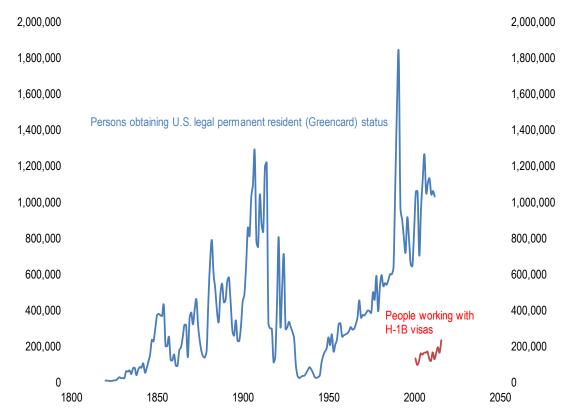


Implied number of dropouts compared with 2007 participation rates:

1,466,000

And When America Has Jobs ...

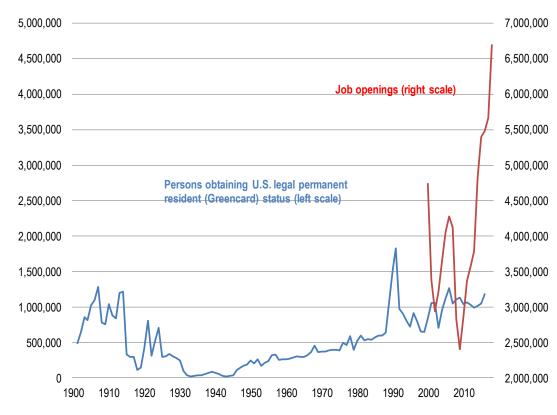
Number receiving legal resident status and H-1B visas



... the World Hears About It

Number receiving legal resident status

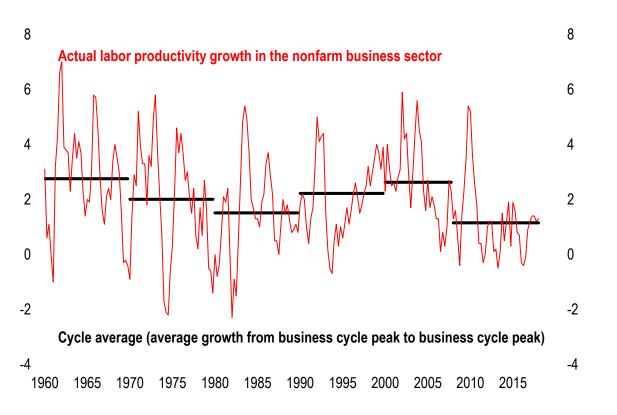
Job openings



Sources: Haver Analytics; U.S. Department of Labor. Updated through 2016 (immigration) and May 2018 (job openings).

Labor Productivity Has Been Slow ...

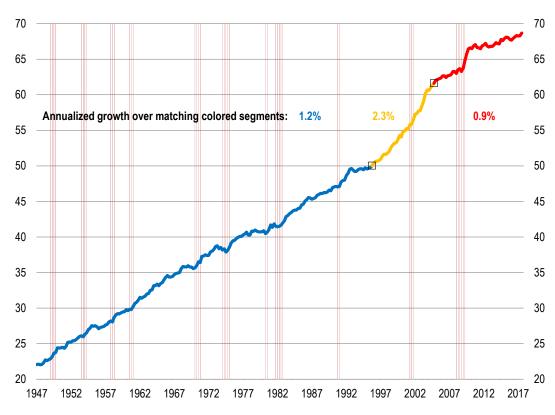
Nonfarm business labor productivity (annualized percent change from 4 quarters earlier)



... But Is Fluid and Unpredictable

Real GDP per hour (\$ per hour)

(annualized percent change)

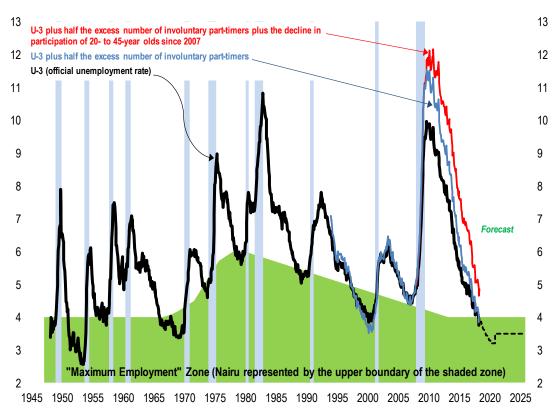


Sources: Haver Analytics; U.S. Department of Labor; U.S. Department of Commerce. Updated through 2017 Q4.

A Balanced Economy Begets Longevity

Yes, But

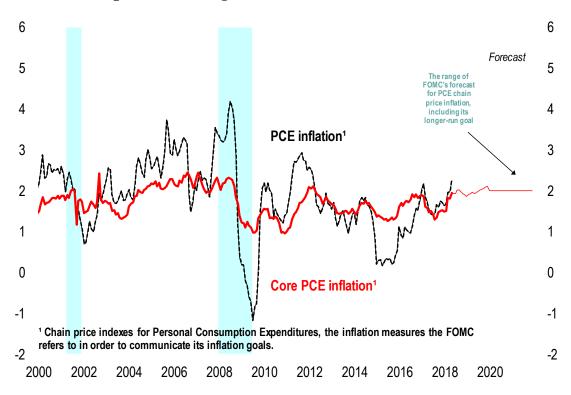
Unemployment (percent of the labor force)





Inflation Is Tame

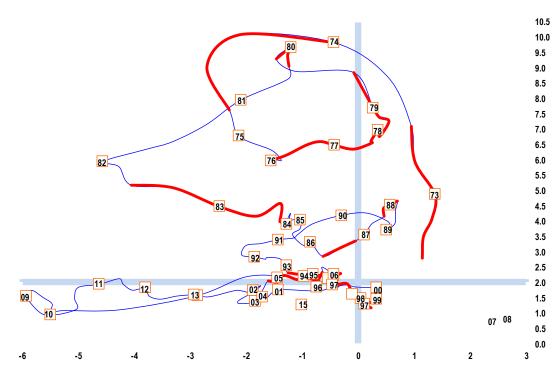
Chain PCE price indexes (percent change from 12 months earlier)



Sources: Haver Analytics; NBER recession bars; U.S. Department of Commerce. Updated through May 2018.

Still Trying to Understand It

Core PCE chain prices (percent change from 12 months earlier)



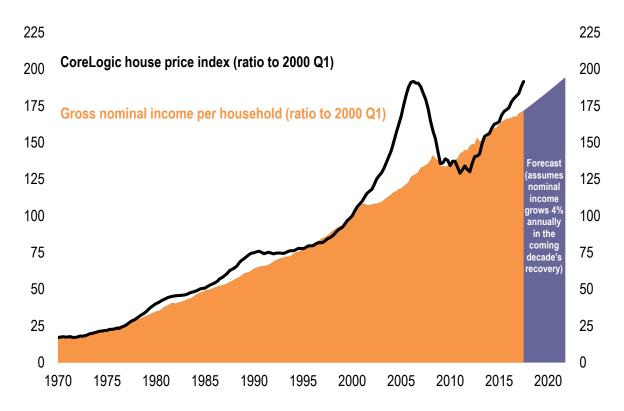
Nairu minus unemployment (percentage points)

Sources: Haver Analytics; U.S. Department of Labor; U.S. Department of Commerce. Updated through June 2018 (inflation) and July 2018 (unemployment).



Financial Imbalances Absent

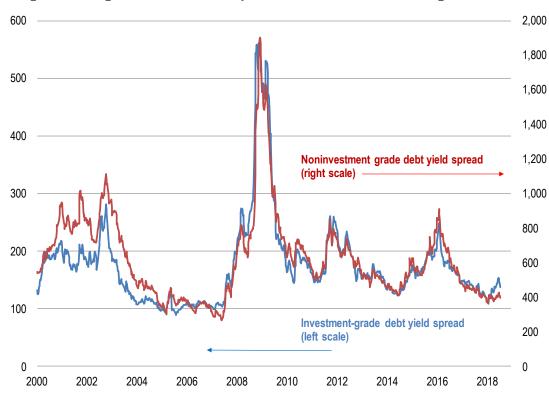
Household income and house prices (January 2000 = 100)



Sources: U.S. Dep. of Commerce; CoreLogic; U.S. Department of Commerce. Updated through 2017 Q3.

Credit Stress Normal

Selected credit spreads (spread versus 10-year Treasuries in basis points)

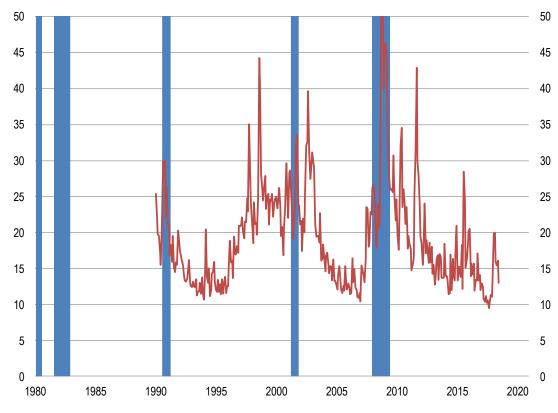


Sources: Haver Analytics; Ibbotson Associates; J.P. Morgan, Federal Reserve Board. Updated through July 27, 2018.



Uncertainty (Equity Volatility) Normal

CBOE Volatility (VIX) Index (annualized units)



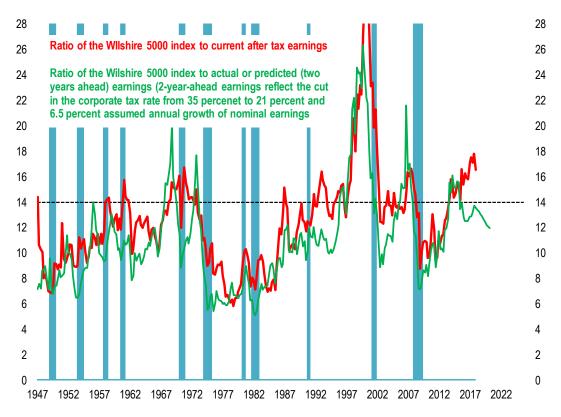
Sources: Haver Analytics; Chicago Board Options Exchange. Updated through July 27, 2018.

Conclusion



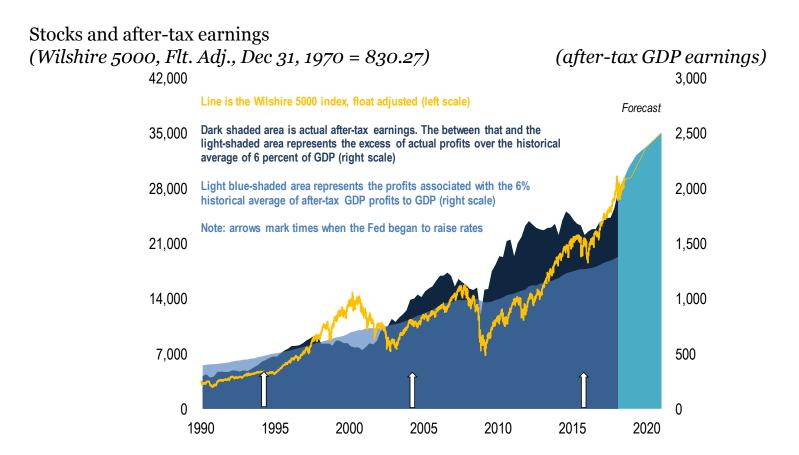
Longevity Is a Big Medium-Term Issue

P-E ratio of the Wilshire 5000



Sources: Haver Analytics; U.S. Department of Commerce; Federal Reserve Board. Updated through 2017 Q4.

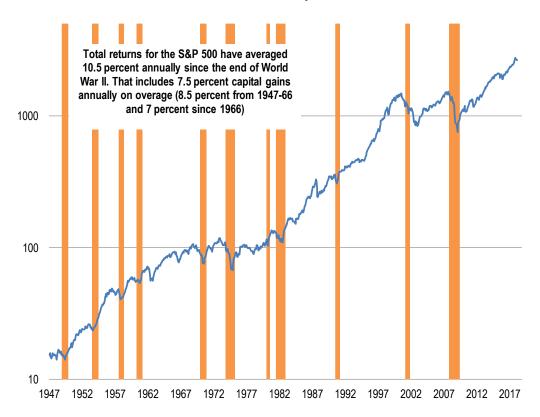
So Is the Millennium's Profit Surprise



Sources: Haver Analytics; Standard & Poor's. Updated through 2018 Q1 (profits) and August 3, 2018 (stocks).

They Say Returns Slow as We Mature ...

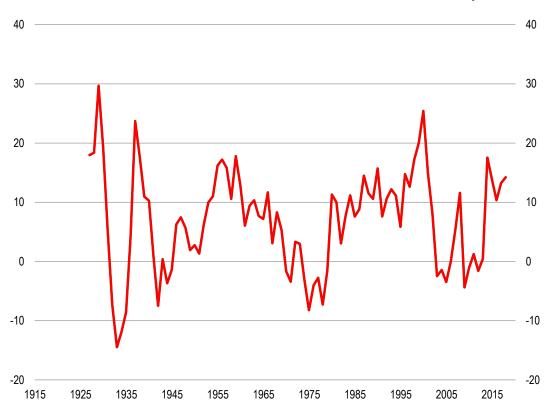
S&P 500 total return (annualized over the next 2 years)



Sources: Haver Analytics; Standard & Poor's. Updated through May 11, 2018.

... But the Global Economy Is Young

S&P 500 total real rate of return (annualized over the most recent five years)



Sources: Haver Analytics; Standard & Poor's. Updated through May 11, 2018.

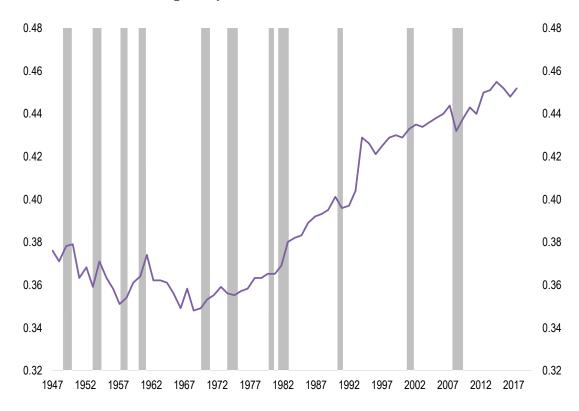


Appendix 1. Two Big Issue

(1) Skewed Income Distribution

This Is Not a Market Economy's M-O

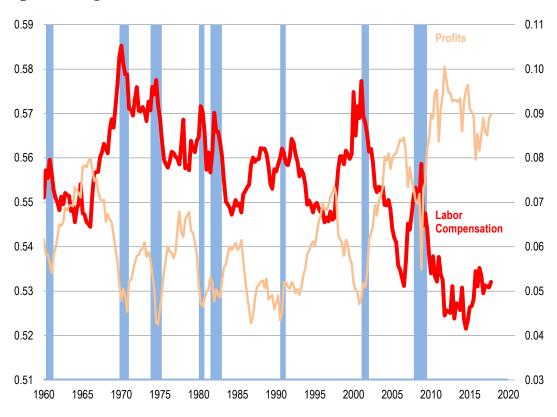
Gini coefficient (o=maximum equality, 1=minimal distribution)



Sources: Haver Analytics; NBER-designated recessions; Census Bureau. Updated through 2016.

It's an Echo of the Digital Revolution

Income share (percentage of Gross Domestic Income)



Sources: Haver Analytics; NBER-designated recessions; U.S. Department of Commerce. Updated through 2017 Q4.

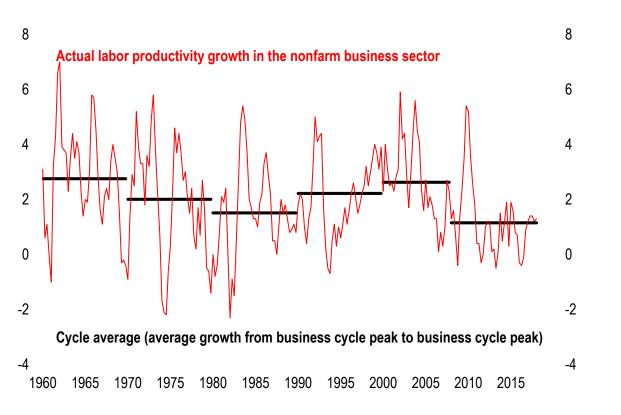
Another Story

The fall of labor's share of GDP in the United States and many other countries in recent decades is well documented but its causes remain uncertain. Existing empirical assessments of trends in labor's share typically have relied on industry or macro data, obscuring heterogeneity among firms. In this paper, we analyze micro panel data from the U.S. Economic Census since 1982 and international sources and document empirical patterns to assess a new interpretation of the fall in the labor share based on the rise of "superstar firms." If globalization or technological changes advantage the most productive firms in each industry, product market concentration will rise as industries become increasingly dominated by superstar firms with high profits and a low share of labor in firm value-added and sales. As the importance of superstar firms increases, the aggregate labor share will tend to fall. Our hypothesis offers several testable predictions: industry sales will increasingly concentrate in a small number of firms; industries where concentration rises most will have the largest declines in the labor share; the fall in the labor share will be driven largely by between-firm reallocation rather than (primarily) a fall in the unweighted mean labor share within firms; the between-firm reallocation component of the fall in the labor share will be greatest in the sectors with the largest increases in market concentration; and finally, such patters will be observed not only in U.S. firms, but also internationally. We find support for all of these predictions.

"The Fall of the Labor Share and the Rise of Superstar Firms," David Autor and NBER, David Dorn, University of Zurich, Lawrence F. Katz, Harvard University and NBER, Christina Patterson, MIT, John Van Reenen, MIT and MBER, May 1, 2017.

On Productivity, Believe Your Lyin' Eyes

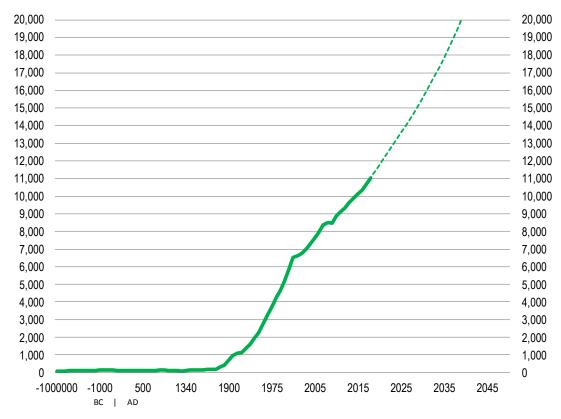
Nonfarm business labor productivity (annualized percent change from 4 quarters earlier)



(2) Globalism / Nationalism

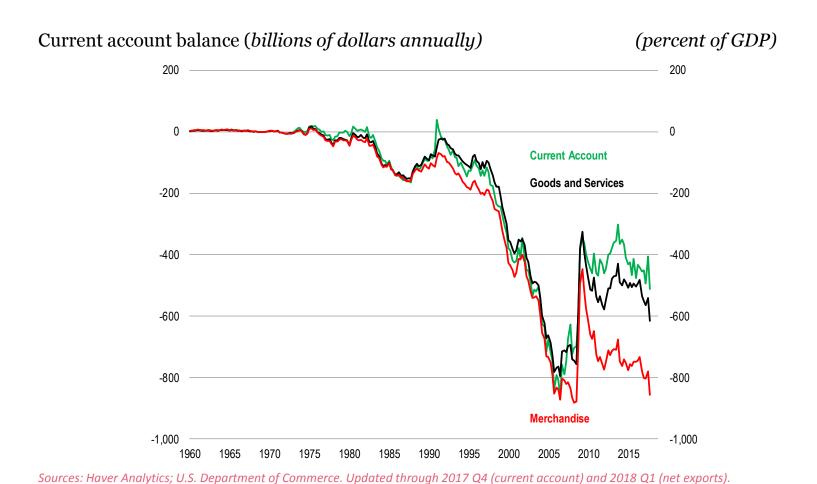
Opportunity (Not Politics) Is In Charge

S&P 500 total real rate of return (annualized over the most recent five years)



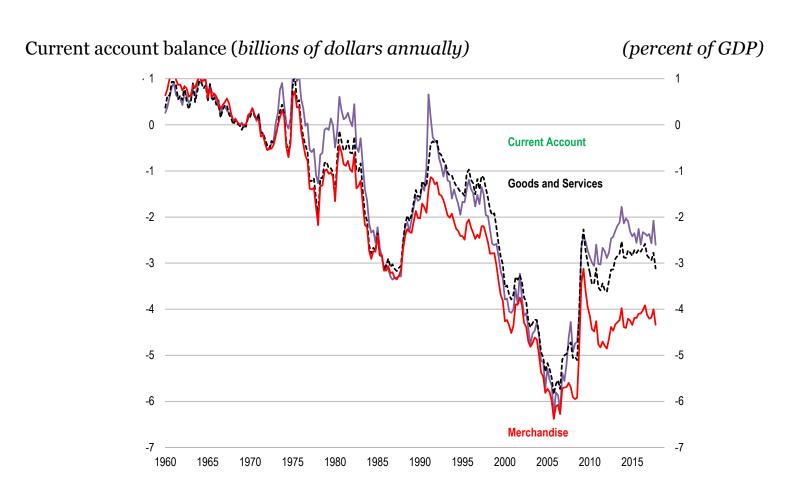
Sources: Haver Analytics; Standard & Poor's. Updated through May 4, 2018.

Merchandise Isn't All We Trade





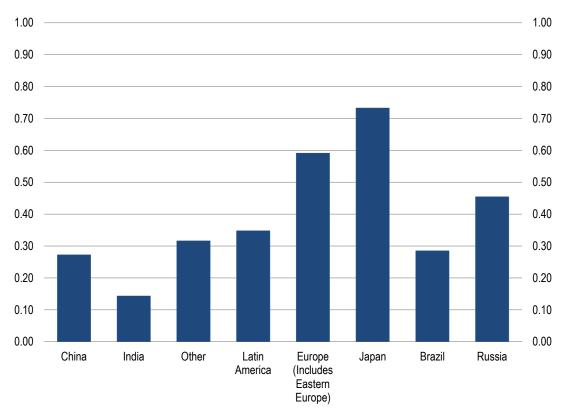
Trade's Impact Is a Relative Story



Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2017 Q4 (current account) and 2018 Q1 (net exports).

A Useful GPS That Says ...

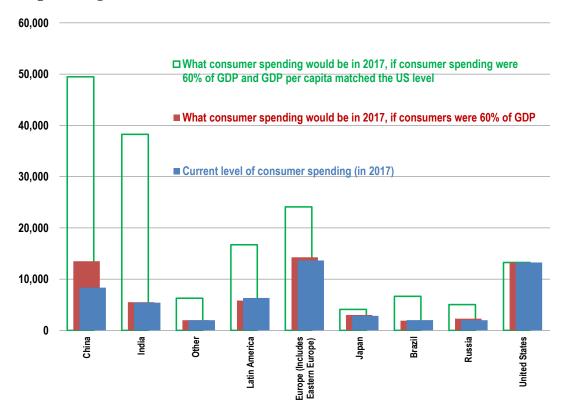
Relative real GDP per capita (ratio to U.S. real GDP per capita, 2009 dollars, PPP basis)



Sources: Haver Analytics; World Bank; JPMorgan Chase & Co. Updated through 2017 Q3.

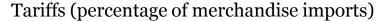
... Helping Others Helps Ourselves

Real consumer spending scenarios (chained 2009 dollars)

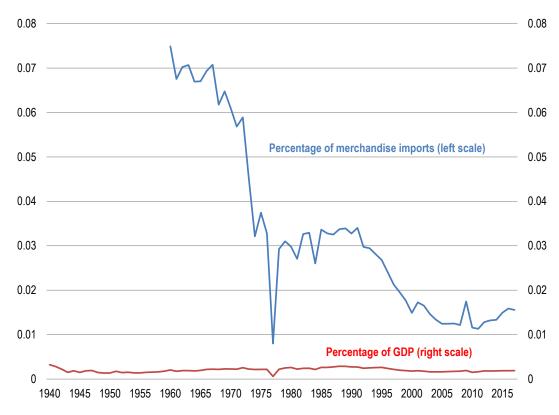


Sources: Haver Analytics; World Bank; JPMorgan Chase & Co. Updated through 2017 Q3.

Tariff Threats Aren't Good Chess Moves ...

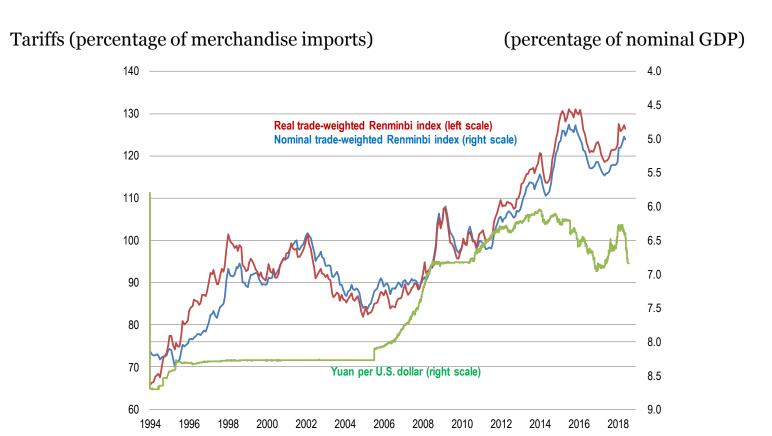


(percentage of nominal GDP)



Sources: Haver Analytics; U.S. Department of Commerce. Updated through 2017.

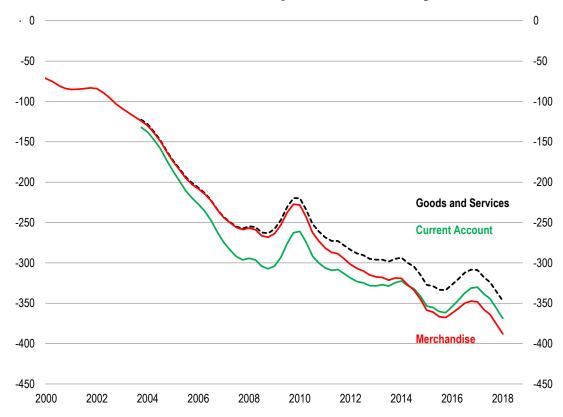
... They Hurt Us ... and People Have Options



Sources: Haver Analytics; U.S. Department of Commerce. Updated through June 2018 (BIS series) and August 3, 2018 (¥/\$ rate)

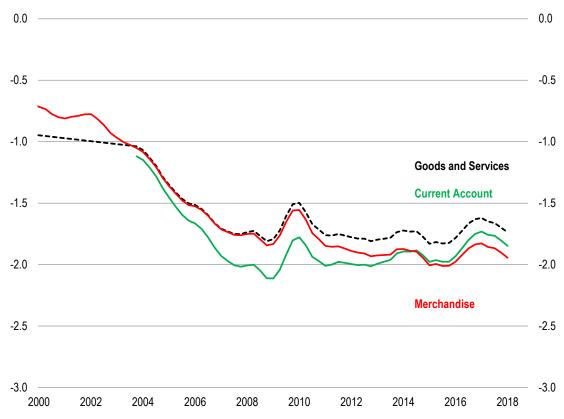
Reality Check ... China ...

Current account balance with China (billions of dollars annually)



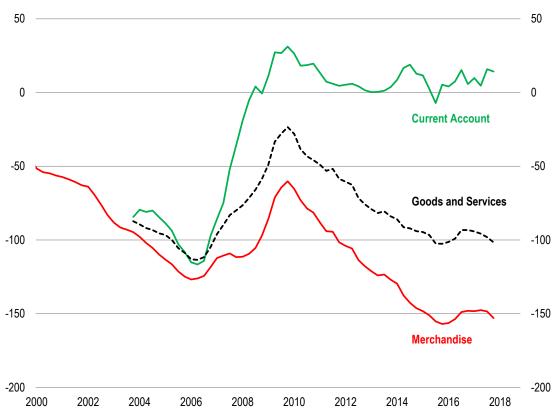
... in Relative Terms

Current account balance with China (percent of GDP)



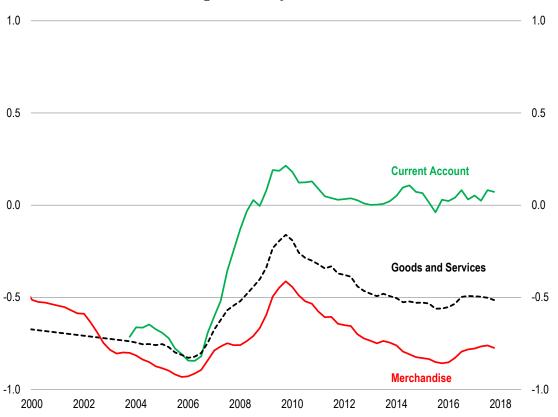
EU ...

Current account balance with the EU (billions of dollars annually)



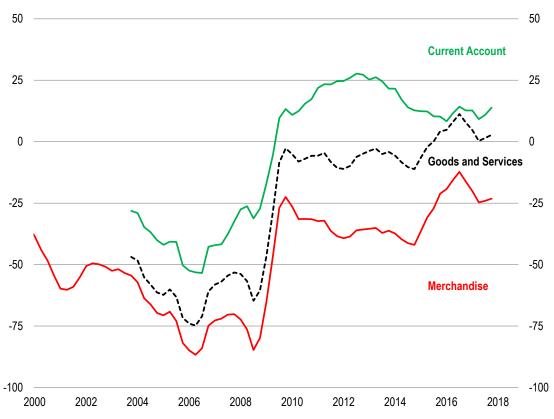
... in Relative Terms

Current account balance with the EU (percent of GDP)



Canada ...

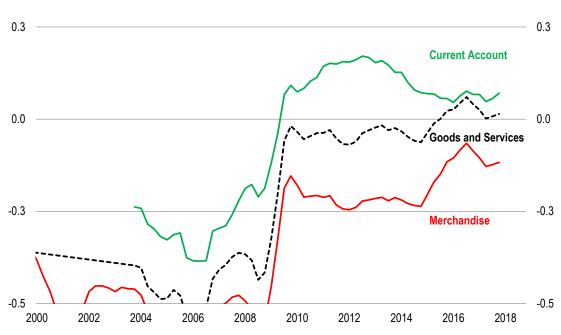
Current account balance with Canada (billions of dollars annually)

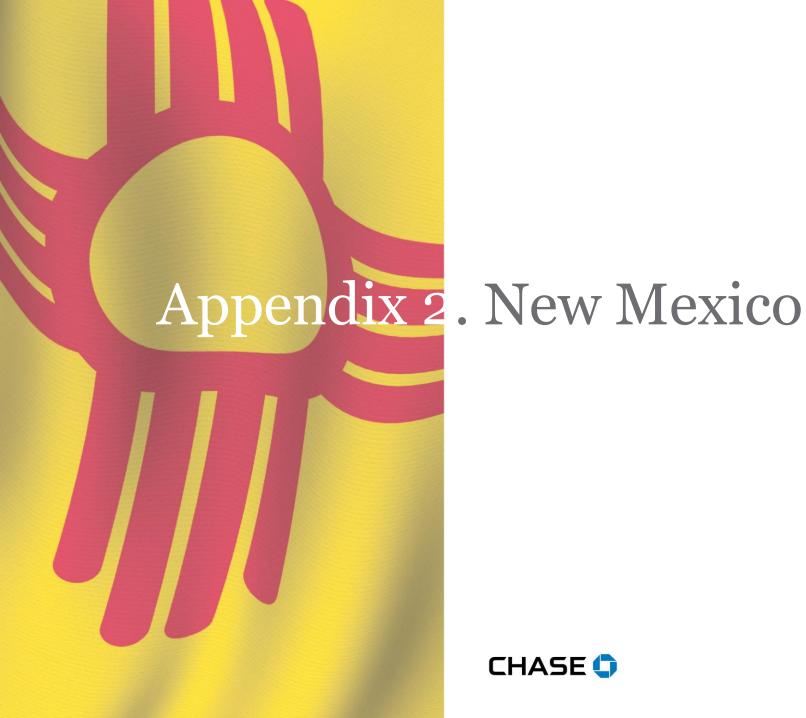


... in Relative Terms

Current account balance with Canada (percent of GDP)



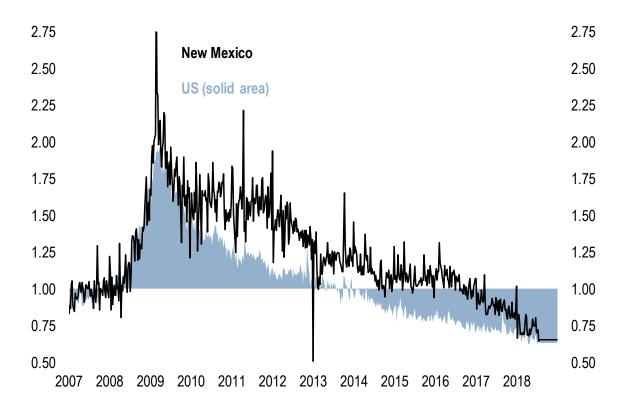






The Layoffs Easing As Energy Drags Fade ...

Jobless claims in New Mexico vs the nation (ratio to 2007 Q4 level)



Source: U.S. Department of Labor. Updated through August 4, 2018.

... and Claimants Dropping

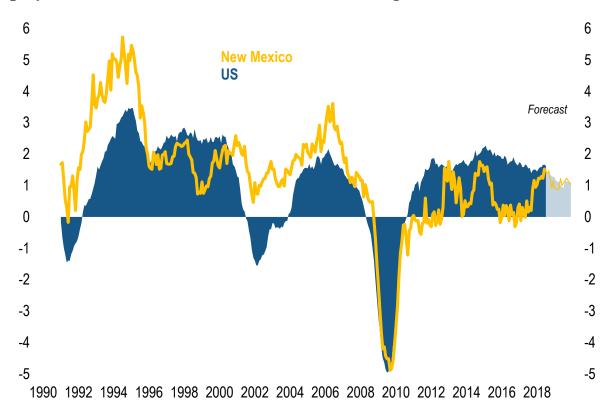
Number of people receiving unemployment benefits



Source: U.S. Department of Labor. Updated through July 28, 2018.

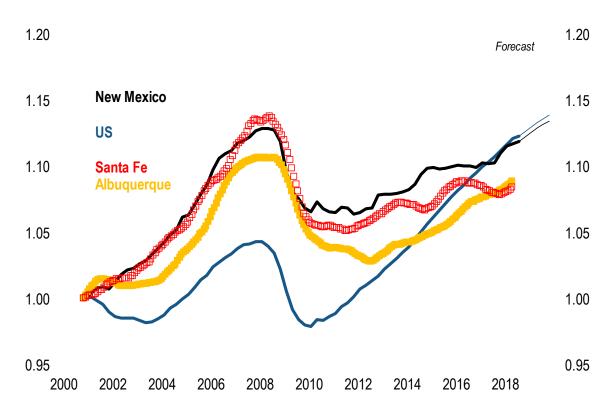
Job Growth Has Picked Up ...

Nonfarm employment in New Mexico and the U.S. (% change from 12 months earlier)



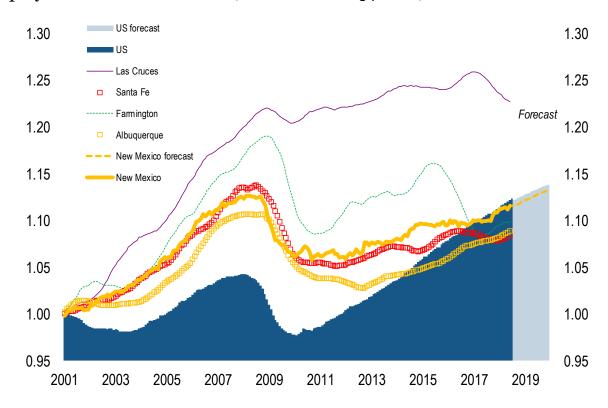
... Not Everywhere Though ...

Nonfarm employment in selected areas (ratio to 2000 Q4 level)



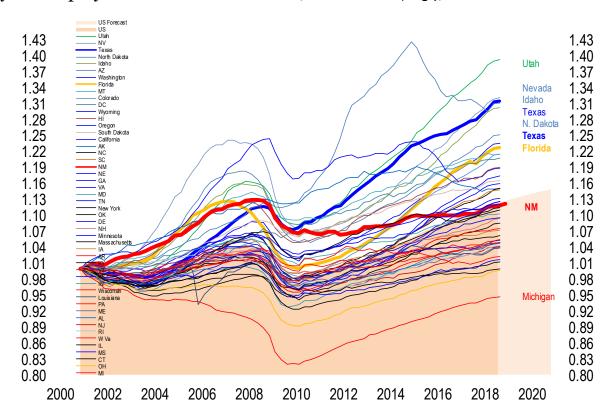
... Ditto

Nonfarm employment in selected areas (ratio to 2000 Q4 level)



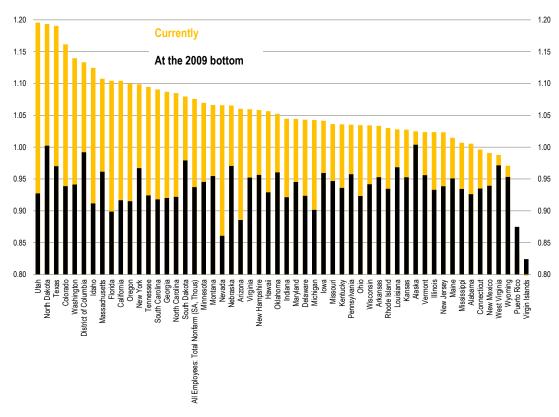
Middle of the Pack

Nonfarm payroll employment across the nation (ratio to 2007 Q4)



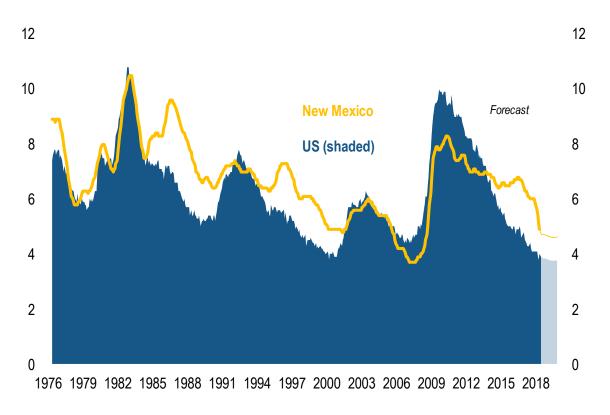
The View Across the Country

Nonfarm employment at the cycle bottom and now (ratio to December 2007 level)



OK, But That's Not Too Bad

Unemployment rate in New Mexico and the U.S. (percent of the labor force)



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